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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,987	12/11/2003	Thomas Sandrock	BJA344A	2041
7590 10/20/2004 BOLESH J. SKUTNIK PhD, JD 515 Shaker Road East Longmeadow, MA 01028			EXAMINER NGUYEN, TUAN N	
			ART UNIT 2828	PAPER NUMBER

DATE MAILED: 10/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/733,987

Applicant(s)

SANDROCK ET AL.

Examiner

Tuan N Nguyen

Art Unit

2828

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 17-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/11/2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION
Election/Restriction

1. Applicant's election of invention I claims 1-16, with traverse of invention II claims 17-20 filed 09/17/2004 is acknowledged. The traversal is on the ground(s) that the invention are classified in different classes and subclasses that no undue burden would be required if all the claims were examined together. This is not found persuasive because the search for the method for fabricating of Invention II is not necessary in the search for the fiber laser/fiber amplifier device of Invention I.

The requirement is still deemed proper and is therefore made final.

Claim Rejections - 35 USC § 102

2. The following is a quotation of 35 U.S.C. 102(e) which forms the basis for all obviousness rejections set forth in this Office action:

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3. Claims 1-9, 14-16 are rejected under 35 U.S.C. 102(e) as being unpatentable over Anthon et al. (US 6411762) or Anthon (WO 99/30391).

With respect to claims 1-5, 15 Anthon et al. '762 (Abstract; page 1-4) and show in (figure 1: 12-26) and discloses multi-clad optical fiber comprising rare-earth-active core, a pump core surrounding active core, a glass inner cladding surrounding pump core, and a protective coating surrounding glass cladding layer, where each layer has refraction index of n_1 , n_2 , n_3 , n_4 respectively; wherein n_1 is greater than n_2 , n_2 is greater than n_3 , n_3 is greater than n_4 (fig 1: Refractive index axis); where pump core excite active core; where inner cladding has thickness

Art Unit: 2828

sufficient to minimize or prevent evanescent field from penetrate protective coating; and active core consisting of near-single mode and single mode; and additional cladding between inner cladding and coating, wherein an index of refraction of outer cladding is less than n_3 and greater than n_4 (Abstract; Col 4: 55-67; Col 5).

4. With respect to claims 1-5, 15 Anthon WO '391 (Abstract; page 1-4) and show in (figure 1: 12-26) and discloses multi-clad optical fiber comprising rare-earth-active core, a pump core surrounding active core, a glass inner cladding surrounding pump core, and a protective coating surrounding glass cladding layer, where each layer has refraction index of n_1 , n_2 , n_3 , n_4 respectively; wherein n_1 is greater than n_2 , n_2 is greater than n_3 , n_3 is greater than n_4 (fig 1: Refractive index axis); where pump core excite active core; where inner cladding has thickness sufficient to minimize or prevent evanescent field from penetrate protective coating; and active core consisting of near-single mode and single mode; and additional cladding between inner cladding and coating, wherein an index of refraction of outer cladding is less than n_3 and greater than n_4 (Abstract; Page 3-4: Specs)

With respect to claims 6-9, 14, 16 Anthon WO '391 (Page 1 of Claims; Page 2-4 of Specs) discloses the active core comprises Phosphorus (claim 2), optical fiber consisting of pure silica (claim 3,4), outer cladding is made from fluorine-doped silica (fig 1: 26), and coating made from polymer.

Claim Rejections - 35 USC § 103

Art Unit: 2828

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or non-obviousness.

6. Claims 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anthon (WO 99/30391), in view of Po (US 6516124).

Anthon (WO 99/30391) discloses the above, the claims further requires that the pump core and cladding are non-circular or D shape. Anthon '391 shows in (Page 2: Claims 20,27) the non circular outer boundary. Po '124 shows a fiber laser/amplifier having a non-circular or D shape cladding (Fig 3: 10). It would have been obvious to one of ordinary skill in the art to provide Anthon the shape as taught by Po '124 to change the beam output pattern.

Communication Information

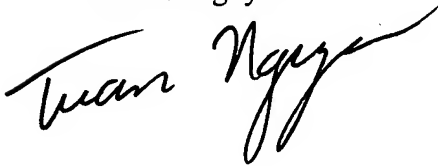
Art Unit: 2828

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan N Nguyen whose telephone number is (571) 272-1948. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harvey Minsun can be reached on (703) 308-16741. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-3329.

Tuan N. Nguyen



MINSUN OH HARVEY
PRIMARY EXAMINER